

# CleanEnergyGroup

## Understanding Solar+Storage

Answers to Commonly Asked Questions  
About Solar PV and Battery Storage

### How can solar+storage be developed to benefit low-income communities?

Low-income communities are statistically more vulnerable to adverse climate impacts and more likely to be subject to greater environmental burdens, such as pollutants from the fossil fuel industry. Low-income households also face greater energy burdens, paying a larger proportion of their income on utility costs compared to higher-income households.

Community-led and owned solar and energy storage (solar+storage) can provide critical economic, energy resilience, and environmental benefits to low-income communities.

- **ECONOMIC BENEFITS:** Solar+storage can deliver economic benefits throughout the year. In utility service areas with storage-friendly programs, residents can receive subsidized batteries and/or payment for allowing the utility to use their battery for grid services; see for instance [Green Mountain Power's Home Energy Storage programs](#). Some state incentive programs, like [California's Self-Generation Incentive Program](#), offer higher incentives for low-income or medically vulnerable populations. [Connecticut's Energy Storage Solutions](#) program provides higher upfront incentives and performance payments for energy storage installations that support low-income households, critical community facilities, and affordable housing.
- **RESILIENCE BENEFITS:** Batteries can provide hours or even days of power in the event of an outage, depending on the loads the system is supporting and whether it's paired with onsite solar. Community facilities equipped with solar+storage can provide emergency services to surrounding neighborhoods during an outage, while also avoiding costs associated with service interruptions or lost inventory. Solar+storage at affordable housing, independent living facilities, and senior housing can allow residents to charge medical devices, access heating/cooling, and store perishables in a community refrigerator in the event of an outage.
- **ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS:** Solar+storage offsets greenhouse gas emissions by reducing a building's reliance on the grid. Energy storage can also reduce reliance on diesel or natural gas backup generators, which emit toxic pollutants that have long-term public health impacts, and which can result in sickness or even death due to carbon monoxide poisoning.

Despite the many benefits, there remain significant obstacles to solar+storage deployment in low-income communities, primarily affordability and accessibility.

- **AFFORDABILITY:** With a few exceptions, energy storage remains unaffordable for individuals and organizations lacking significant financial resources. Service providers operating in low-income communities often deal with capacity issues and limited budget resources, making energy storage development an especially difficult endeavor. Without economic incentives and financing opportunities, solar+storage may remain uneconomical for most low-income community members.
  - **Recommendation:** Federal, state, and utility programs that allocate designated funds and higher incentive levels to support solar+storage development in low-income communities, like the [California Self-Generation Incentive program](#) and [Solar Massachusetts Renewable Target \(SMART\) Program](#), can lower out-of-pocket expenses and reduce risks associated with financing. Additionally, innovative financing opportunities tailored to the needs of low-income communities can help overcome the financial hurdles associated with paying for solar+storage.
- **ACCESSIBILITY:** The few states that have developed incentives to boost storage deployment in low-income communities may experience little uptake due to limited program visibility, poor program design, and inadequate community engagement efforts. Diesel generators, the most common type of customer-sited backup power, benefit from decades of market dominance. To raise awareness about energy storage as an alternative to generators, more informational resources about energy storage need to be shared by trusted independent sources.
  - **Recommendation:** Policymakers and program administrators should [prioritize equity](#) within program design and marketing. Communities would also benefit from no-cost technical assistance and predevelopment support to understand the benefits and barriers to project development and assess the financial and technical feasibility of installing solar+storage at their home or at a community facility.

This text was adapted from chapter 11 of Clean Energy Group's July 2024 publication, *Understanding Solar+Storage: Answers to Commonly Asked Questions About Solar PV and Battery Storage*. Read the full guide at [www.cleangroup.org/publication/understanding-solar-storage](http://www.cleangroup.org/publication/understanding-solar-storage).



### Maycroft Apartments: Solar+Storage for Low-Income Residents in Washington, DC

Jubilee Housing provides affordable homes and supportive services to low-income and very low-income residents in Washington, DC. Solar+storage at Jubilee Housing's Maycroft Apartments provides emergency backup power to a community space. In the event of an outage, residents can use the community space to access heating/cooling, a television, refrigeration for perishables and temperature-sensitive medication, and outlets to charge cell phones and electricity-dependent medical equipment. The 46-kilowatt/56-kilowatt-hour energy storage system, connected to a 62.4-kilowatt rooftop solar array, also powers lighting for stairwells and hallways throughout the complex. In addition to resilience, the community solar array saves each household approximately \$40 every month on utility bills.

### Solar array on the roof of Maycroft Apartments in Washington, DC.

Photo: New Partners Community Solar